DOCUMENT RESUME

ED 412 982 IR 056 714

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TITLE Advertised Demand for Educational, Professional and Interpersonal Competencies in Academic Library Positions.
PUB DATE 1997-04-00
NOTE 59p.; Master's research paper, University of North Carolina at Chapel Hill.
PUB TYPE Dissertations/Theses (040) -- Reports - Research (143)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Academic Libraries; *Competence; *Employment Opportunities; *Employment Potential; *Employment Qualifications; Higher Education; Interpersonal Competence; Job Applicants; Job Skills; Labor Market; Library Schools; Library Science; Occupational Information; *Occupational Surveys
IDENTIFIERS American Library Association

ABSTRACT

This study evaluates demand for specific competency categories in the 1996 United States academic library job market. Its purpose is to identify frequencies of requested qualifications and of job openings by United States region, to inform students and administrators of Masters of Library Science (MLS) Programs of current competency requirements and regional opportunities in the highly competitive academic library job market. Content analysis of "American Libraries" established that the ALA-accredited MLS continues, as in previous studies, to lead all other qualifications. The MLS gave overall educational competency the top frequency ratio of 95.9%, followed by professional competency at 90%, technological at 82.4% and interpersonal at 79.4%. Demand for "library or related experience" was present in 64.7% of United States advertisements. Of the interpersonal skills, "communication" was required in 72.9% of advertisements and "work with others" in 55.9%. The South advertised more positions than any other region. Twelve figures and tables throughout the text show findings. Six appendices present data tables. (Contains 11 references.) (Author)

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ED 412 982

ADVERTISED DEMAND FOR EDUCATIONAL, PROFESSIONAL AND INTERPERSONAL COMPETENCIES IN ACADEMIC LIBRARY POSITIONS

by

Elise B. Love

A Master's paper submitted to the faculty
of the School of Information and Library Science
of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements
for the degree of Masters of Science in
Library Science.

Chapel Hill

April, 1997

Approved by:

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Advisor

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Elise B. Love. Advertised Demand for Educational, Professional, and Interpersonal Competencies in Academic Library Positions. A Master's paper for the M.S. in L.S. degree. April, 1997. 44 pages. Advisor: Claudia J. Gollop

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Headings:

Academic libraries

Applications for positions-Evaluation

College and University Librarians

Content Analysis

Job analysis

ACKNOWLEDGEMENTS

I am grateful to Ritch Milby for his advice on data coding and analysis, for the hours he devoted to coaching and encouraging me in various stages of this project, and for various favors too numerous to catalogue. I also wish to thank Claudia Gollop for her enthusiasm, expert advice and extraordinary patience with the overall progress of this investigation.

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I. INTRODUCTION

In the last decade American libraries have been swept up in a technological revolution. Library collections and services have been transformed through the incremental additions of new information technologies. Every domain of library operations in the 1990's is influenced by information technology. Online catalogues, integrated systems, and electronic access services appropriate a major portion of academic library budgets. These new technologies are perceived as essential tools to manage diverse information formats, provide current information, reduce staff and collection costs, and improve information access.

But judicious selection and handling are required to ensure the successful implementation of information technologies. The rapidly changing character of such technologies makes interpersonal, managerial, and leadership skills the critical constants in effective library service and management (Malinconico 1989, p.143). The common denominator of these skills is proficiency or competency in interpersonal associations.

In this 1996 academic library ad sample, overall ratios of interpersonal, professional and technological competencies were summarized, as were competency ratios for public service, technical, administrative and a fourth "other" position category. The distribution of announcements by geographic region was also determined. This research is directly relevant to curriculum planning decisions for library school students and administrators and to anyone entering the academic library job market.

II. LITERATURE REVIEW

Recent content analyses have found unprecedented demand for technical skills in traditional academic library positions (Xu, 1996; Zhou, 1996), reflecting, though not immediately, major phases of technological change since the appearance of automation and subsequent technological innovations in libraries (Xu, 1996, p.10). Several studies have compared the impact of information technologies on requested technological competencies for technical service and reference or public service (Reser & Schuneman,1992; Xu, 1996; Zhou, 1996).

Information technologies such as electronic mail and the Internet have blurred former organizational and jurisdictional boundaries in all fields with one result being that technical services tasks, particularly in cataloging and acquisitions areas, are increasingly delegated to paraprofessionals (Oberg, 1993). But a 1996 *Library Journal* survey of librarians reported that paraprofessionals, however skilled, feel shut out from advancement opportunities in library organizations (St. Lifer, 1996, p. 30). Thus, technical skills that would seem essential to advancement are not sufficient in themselves for success in library employment. Recent content analyses of academic library job announcements have reported nearly unanimous agreement on the ALA-accredited M.L.S as the key credential to professional recruitment (Hill, 1992; Reser & Schuneman, 1992; Xu, 1993; Zhou, 1996).

In the past two decades, professional library journals have tendered much speculation on the role of information technologies in redefining both specific job classifications in libraries and the overall organizational roles of librarians. Concurrent with rising demand for technical skills and professional preparation, several studies have tracked a steadily increasing demand for interpersonal, communication, and managerial skills (Block; 1985; Starratt, et. al.; 1985; Hill, 1992).

Malinconico (1989) is frequently cited for articulating the need for *socio-technical* library leadership to manage the organizational changes induced by technological change in libraries. Xu's comparative study of academic library catalogers and reference librarians showed that managerial skills were more highly requested in technical services, the library domain where the impact of automation was initially greatest. Hill's analysis clearly showed that interpersonal skills were in notable demand in administrative and special library positions. These findings confirm Malinconico's hypothesis that managerial skills are more essential than ever in implementing new information formats and new organizational roles in libraries.

A recent survey of librarians in all major institutional categories (St. Lifer, 1996) confirmed that technology is redefining on-the-job responsibilities and required competencies for librarians in all service sectors. Survey participants perceived circumstances such as re-engineering and cost cutting as associated with technological change. The survey reported that the professions' number one challenge is "keeping up with technology." Thus, it is not surprising that the 1996 Library Journal placement and salary survey indicated that M.L.S. graduates with training and experience in new information technologies are favored in the job market (Carson, 1996, p. 33). This

placement survey also cited a shift from demand for traditional librarian positions toward positions associated with information technologies such as the Internet.

The focus of prior content analyses of academic library position announcements, however, is on demand for technological competencies within traditional academic library specialization areas, rather than on the incursion of technicians into library organizations. Zhou's 1996 time series study investigating demand for computer-related skills in academic libraries purposely excluded Systems Librarian ads because technological skills are intrinsic to this job category.

Regional tabulations from previous content analyses present methodological variations in length of studies, types of libraries, and data sources selected such that definitive comparison is problematic. Block's 1980 two-month sample of all library positions from the job announcement file of the University of Texas at Austin, a highly populated area, showed fairly even overall geographic distribution of announcements, though somewhat weighted towards the West South Central U.S. region.

A sample of *College and Research Library News* academic position ads from 1974, 1979, and 1984 was also well distributed geographically, but showed a disproportionate number of announcements from the densely populated states of New York and California (1985, Starratt, et al, p. 189). In an analysis of nationally advertised jobs for 1988, the North Atlantic and Midwest regions supplied the greatest number of job announcements (Reser and Schuneman). Reflecting the closure phase of job marketing, the 1995 *Library Journal* annual placement and salary survey, reported a characteristic concentration of placements in the Northeast and Midwest (Carson, 1996, p 29).

The significance of the present study is its continuity and comparability with previous studies. Such studies present a profile of prerequisites for academic library employment that is relevant to curriculum planning decisions for library school students and administrators and to anyone entering the academic library job market.

III. METHODOLOGY

American Libraries was selected as the single source publication for this content analysis because of its standardized advertising format and broad coverage of the academic library job market. Restricting the study to *American Libraries* increased the study's comparability with similar content analyses that used this publication as their sole source (Hill, 1992; Zhou, 1996). Issues were analyzed at two-month publication intervals: February, May, September, and November. The three month gap between May and September was accounted for by the publication of a combined June/ July issue. The specific choice of 1996 as the study year was intended to address current job market trends, in particular the ascendancy of the Internet and its ramifications for expansion and redefinition of academic library services.

All positions specifying full time academic library employment for a term of at least nine months were included in the sample. This study did not identify whether job ads ranked qualifications, skills, or competencies as required or preferred or whether the qualifications were mentioned in the job description. All functional qualifications mentioned in position announcements were coded as necessary competencies and their frequency of occurrence tabulated. Specific position titles and institutional sites were included on coding forms as a reference system to avoid coding errors and ad duplication although this information was not entered into the data set.

Faculty status and tenure-track specifications were coded for each advertisement. Nominal variable classifications included position type, major geographic region, and sub-region. The four categories of position type were public services, technical services, administrative, and a fourth category of "other". The "other" category consisted of non-administrative library specialist positions, neither predominately public or technical, but possibly integrating functions of both. Basic job coding classification categories, listed in Table 1, were adapted from Block's 1980 study and from two recent content analyses of academic library positions (Xu, 1996; Zhou, 1996).

TABLE 1

CLASSIFICATION BY POSITION TYPE

PUBLIC SERVICES	TECHNICAL SERVICES	ADMINISTRATIVE/ SPECIAL LIBRARIAN	OTHER
Circulation	Cataloging	Business/ Economics Librarian	Area Specialist
Curriculum/ Instructional/ Learning Resources	Acquisitions	Engineering Librarian	Audio-Visual Librarian
Distance Learning/External Degree	Collection Development	Head Administrator	Bibliographer
Electronic Resources	Documents	Special Librarian	Curator/ Rare Items Librarian
General Librarian/ Public Services	General Technical Services		Maps Librarian
Interlibrary Loan/Document Delivery	Microfilms		Technology Librarian
Reference	Preservation		Public/ Technical Services Hybrids
	Serials		

State location for each position was also included on the coding form, for purposes of classification by region. "Northeast", "Midwest", 'South", and "West" were the major regional divisions used, consistent with regional divisions in *Library Journal* placement surveys and in Reser and Schuneman's 1992 study. Conformity with Block's study was achieved by using Bureau of Labor Statistics geographic subdivisions, identified in Table 2, for more specific geographic coding.

TABLE 2

GEOGRAPHIC CLASSIFICATIONS

NORTHEAST	**MIDWEST**	**SOUTH**	**WEST**
Northeast	**East North Central**	**South Atlantic**	**Mountain**
ME, NH, VT, MA, RI, CT	OH, IN, IL, MI, WI	DE, MD, DC, VA, WV, NC, SC, GA, FL	MT, ID, WY, CO, NM, AZ, UT, NV
Mid-Atlantic	**West North Central**	**East South Central**	**Pacific**
NY, NJ, PA	MN, IA, MO, ND, SD, NE, KS	KY, TN, AL, MS	WA, OR, CA, AK, HI
		West South Central	
		AR, LA, OK, TX	

Individual competency categories were a composite of terms from previous studies and of terms recorded in the preliminary coding test of 35 ads. The author conceptualized professional competencies as a composite of educational competencies, occupational competencies, and experience. Consistent with previous studies, however, these three

dimensions were separately classified for purposes of analysis, with the categories defined as technological, professional, and experience. The professional classification category corresponds to the "library skills" category used by Hill (1992, p. 22-23).

The only nominal competency variable was "years of experience", in the educational category. All other variables were of the binomial (yes or no) type. Selection and weeding of individual variables in the competency categories was a demanding task. This was particularly true in the technological competency category because many specific computer–related competencies were cited in the ads.

The pretest indicated that some promising individual competencies had been omitted, and that others required redefinition or re-coding. Reduction and re-coding of the data collection form constituted a second-stage pretest, which extended through a cumulative total of 75 cases. Geographic Information Systems was collapsed into the resources in electronic formats category and business library experience was absorbed into a "library or relevant experience" indicator.

As a precaution against the need for extensive future annotations, all specific competencies of any possible consequence were appended to the data collection form. Examples included "cultural pluralism", under interpersonal competencies, and "computer-aided instruction" and "knowledge of telecommunications", under technological competencies. Many, if not most, added competency categories were ultimately of peripheral significance to the overall sample. Such comprehensive documentation was, nonetheless, valuable because it was impossible to predict the exact results before all the data had been analyzed. For example, in the technological category, "integrated systems"

was added and retained as a second stage automation competency, due to its regular recurrence in the job description portion of the ads.

The pretest indicated that interpersonal competencies were generally cited in the ads as literal requirements or elements of job descriptions. This category was the easiest competency area to classify and code. In previous studies, management, planning and supervisory skills were generally evaluated separately (Xu, 1996; Starratt, et. al, 1985), or separately within the category of managerial skills (Hill, 1992). In this study, these qualifications were classified under a composite heading of interpersonal competencies because, in their organizational applications, their common denominator is competency or proficiency in interpersonal associations.

Pretest observations indicated that "experience" or "library experience" was the general extent of specificity for experience requirements. In their research, Reser and Schuneman cited a similar lack of specificity. (1992, p. 53). Their consequent decision not to distinguish between types of experience seemed logical in this study also, with the exception of cataloging experience.

The most frustrating situation arose in the technological competency category. Halfway through the study, this category had proliferated into a clutter of miscellaneous requirements, defying orderly classification. As a means of indicating both the ubiquitous and heterogeneous nature of this competency category, an overall summary variable of "information technologies" was created. Examples of miscellaneous competencies included under this umbrella term were multimedia applications, telecommunications, and specific operating systems and computer applications. At this point the data collection

form was finalized, with minimal subsequent annotations required. This form is included in Appendix A.

Academic library listings fitting the study's research criteria amounted to 37 for February, 37 for May, 51 for August, and 45 for November, bringing the overall total for the study to 170 advertisements. Statistical Package for the Social Sciences was used for all data analysis. Summary frequencies were obtained for regional location, faculty status, tenure-track, required publication, and position classification variables. Summarized frequencies for individual competencies were then re-coded into composite categories to obtain frequency summaries at this competency classification level. Cross tabulation frequencies were then obtained for individual and composite competencies by position type.

FINDINGS

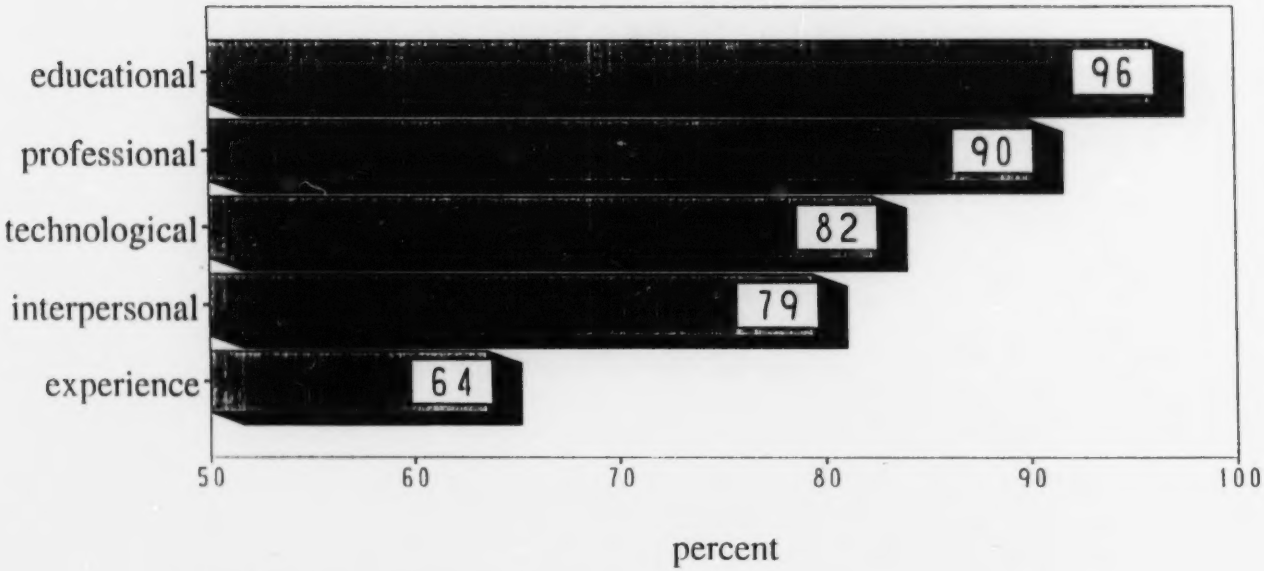
This study examined a 1996 sample of job advertisements for academic librarians published in *American Libraries* to determine demand for specific job competencies. The five categories established for overall competency analyses were educational, professional, technological, interpersonal, and library or relevant experience. As shown in Figure 1, educational competencies were specified most often, in 95.9% (n=163) of the total sample. This figure reflects the ubiquitous ALA-accredited MLS requirement. Professional, technological and interpersonal competencies were indicated at frequency ratios of 90%, 82.4%, and 79.4% (n=153, n=140, n=135) respectively. Experience was a specified requirement in 63.5% (n=108) of the ads.

An overall comparison of competencies by position category suggested differing areas of emphasis for each category, albeit somewhat incomplete. This was due to unspecified but probably implicit competencies, particularly in administrative ads, and to the equalizing effect of using composite categories of competencies. Ambiguity and omissions were particularly evident in administrative ads.

An index variable representing any technological competency was created in the technological competency category, to summarize the multiplicity of technological competencies specified in the ads. Ads included everything from experience with e-mail to knowledge of satellite up and down links, indicating a pervasive, though heterogeneous, demand for technological skills. This outcome is in sharp contrast to a 1980 study, which found a lack of technical emphasis in academic position ads (Block, 1985, p. 12). In the present study, the overall index for technological competency requirements was quite high, at 82.4%.

Figure 1

Competency Categories



*Decimals were rounded

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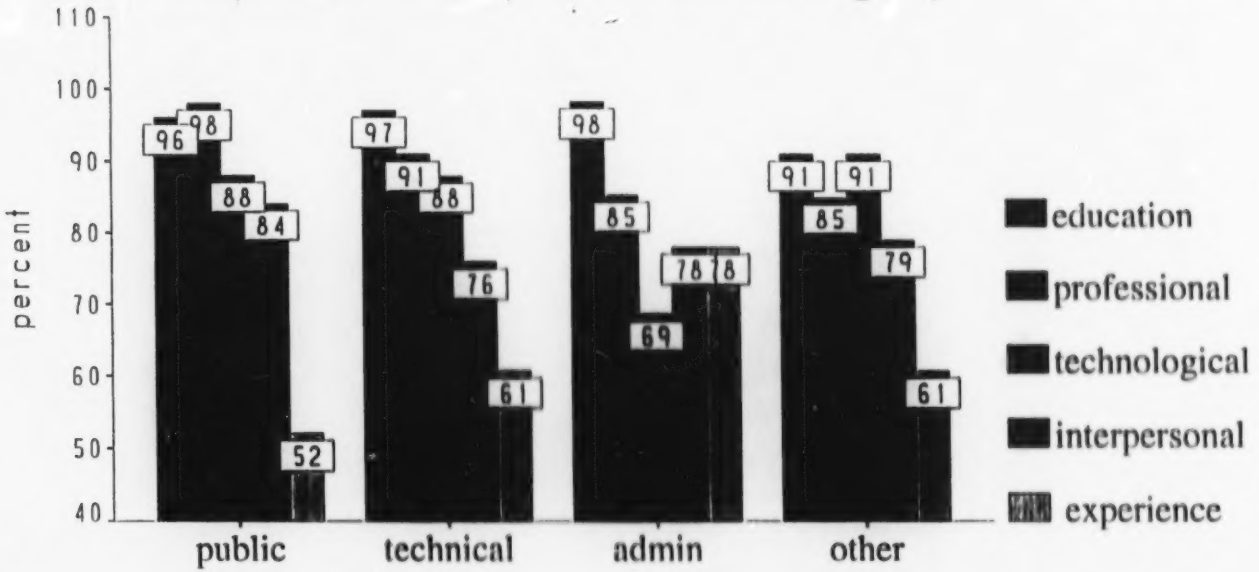
Demand for general technological competency converged at roughly 88% in public and technical services, confirming outcomes of a related study, where ratios for both categories converged near 90% in 1989, rising in 1994 to 96.7% for technical services, and 95.9% for public services (Zhou, 1996, p. 265). The author anticipated lower comparative ratios of demand for technological competency in the present study because Zhou's analysis included only advertisements citing at least one computer-related qualification. In the administrative category, the present study's 69% ratio was a middle ground between Zhou's ratio of 60.7% in 1989 and 87.9% in 1994. The 91% technological competency ratio for the present study's "other" category was difficult to reconcile with Zhou's 75.3% (1989) to 78.7% (1994) ratios for "other" positions. This is probably due to the present study's inclusion of technology librarians, including systems librarians, in the "other" category, which is at variance with Zhou's exclusion of systems librarian positions from analysis. In Figure 2, overall competency ratios between the technical services and "other" categories are proportionally similar. The variation in specific competencies confirms the separate functional requirements for these position types. (See Appendices for cross-tabulations of specific competencies by position types.)

Of the 170 cases analyzed, the administrative category had the largest proportion of position announcements at 31.8% (n=54), followed closely by the public services category at 29.4% (n=50). The technical services and "other" position categories were tied in frequency at 19.4% (n=33 x 2). These figures were difficult to compare with those in previous studies due to variations in classification schemes and study size. However, the figures appear to verify the downsizing of technical service areas, particularly cataloging, as a result of library automation (Xu, p. 11). Conversely, greater numbers of

Figure 2

Competencies by Position Category



*Decimals were rounded

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public service positions appear to reflect growing demands for staff in this area to act as information intermediaries for patrons learning to access electronic resources (Xu, p. 12). The high proportion of administrative positions in this sample may be attributed to a desire on the part of institutions to cast a nationwide net to attract the largest pool of qualified candidates for these leadership positions. It follows that entry-level ads may be under-represented in *American Libraries* and other national journals because they are easier to fill with less intensive market exposure.

This judicious advertising strategy was proposed by Reser and Schuneman (1992, p. 53) to account for the high proportion of experience-related positions in their particular sample of 1133 ads from nationwide periodicals. Their study found a 62% requirement for previous experience in public services and a 38% requirement in technical services. A similar demand for experience was found in the present study (see Figure 3) with a 63.5% overall ratio, exceeding the demand ratio of 42.8% in a 1991 study (Hill, 1992).

In the present study, experience was a specified prerequisite for 42 of 54 administrative ads (perhaps implicit for the remainder), for 20 of 33 ads in both technical services and "other" position categories, and for 26 of 50 public services positions.

For the "years of experience" variable, 50.6% of ads did not specify a requirement. Where this qualification was specified, technical services had the highest rate of all categories, as shown in Figure 4. The mean was two years in public services, three years in technical services, and five years in the administrative category, as shown in Figure 4. Only positions in the administrative category specified periods of experience longer than 5 years, with 8 to 10 years the top range specified.

Figure 3

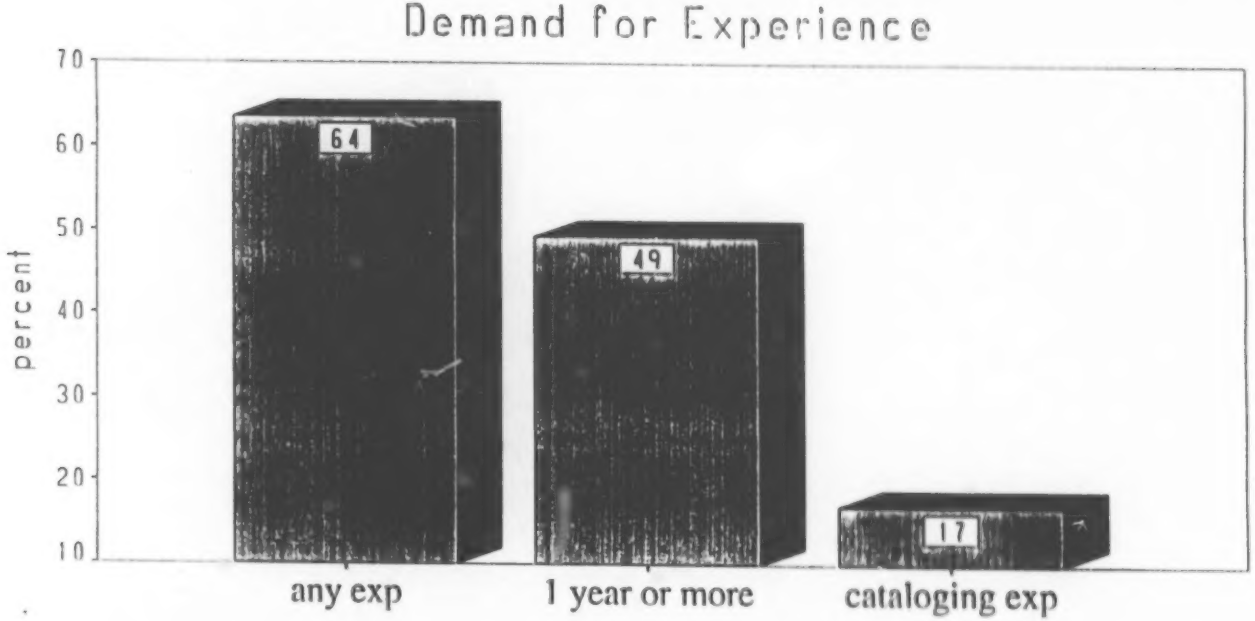

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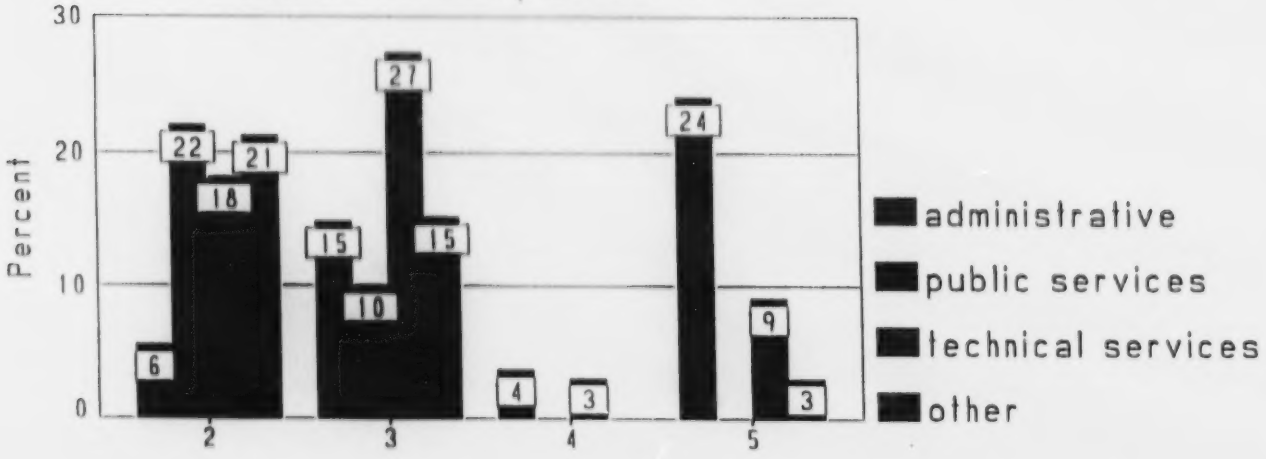
Figure 1

Years of Experience



2-5 yrs.

*Decimals were rounded

*When a range of years was given, lowest number was tallied

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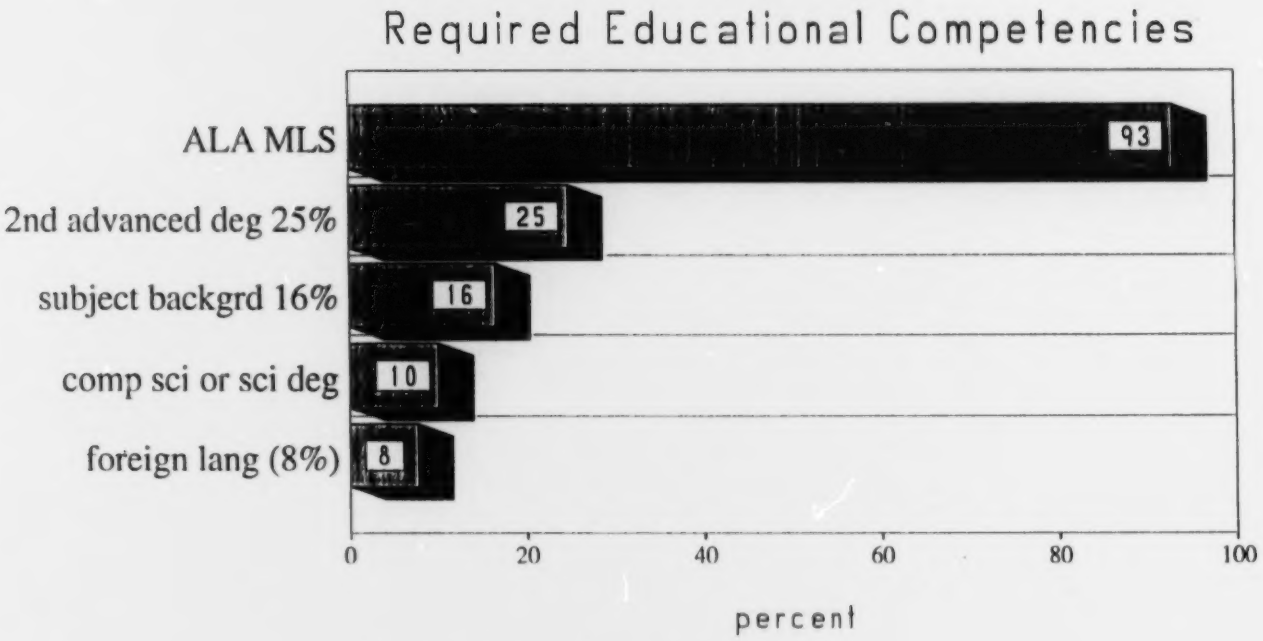
The greatest homogeneity of competencies was found in the area of education. The ALA-accredited MLA or its equivalent (generally understood as foreign equivalent) was required for 92.9% (n=158) of the advertised positions. Though this has been the standard prerequisite since the Association of College and Research Libraries prescribed it as the basic qualification for academic library employment, recent demand for technological experts appears to have allowed for relaxation of this requirement. In fact, a slight decrease is indicated from the 100% ratio found in an analysis of the 1980 market (Block) and the 94.5% ratio of an analysis for 1990 (Hill). Other relatively significant educational competency requirements were second advanced degree, subject background, computer science or science degree, and foreign language proficiency. Overall demand for educational competencies is charted in Figure 5.

An additional advanced degree was required in 24.7% (n=42) of ads, notably in the administrative position category where it was specified in 19 of 54 ads. Subject background was specified in 16.5% (n=28) of all ads. The 10% overall demand for a computer science or science degree was balanced between the two, with highest demand for science degrees in public services, and highest demand for computer science degrees in the "other" position category. Overall demand for foreign language proficiency was 8% (n=13), with a 15% frequency ratio in technical services exceeded by 18% in "other" positions, which included bibliographers. For both public services and administrative positions the ratio for foreign language demand was just 2% (n=1). The ratios for public and technical services showed a marked decline compared to 1988 ratios of 24.1% for overall foreign language proficiency, with a 7% ratio for public services and 23% for technical services (Reser and Schuneman, 1992, p. 52). It is unclear whether technical services included bibliographer positions in the 1988 study. If so, there would be closer agreement in comparative results. A 1990 analysis by Hill found an overall 24.8% foreign language requirement. Thus, the present study confirms a steadily declining demand for foreign language proficiency, excepting the bibliographer specialization. .

Figure 5



*Decimals were rounded

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In all competency categories, this study focused on qualifications that were relatively prevalent in the position advertisements; thus, professional preservation and archival proficiencies were excluded. The apparent hegemony of professional public services skills, shown in Figure 6, reflects the greater number of public service positions in the sample, and the greater compartmentalization characteristic of technical service tasks.

Distribution of demand for professional competencies generally reflected the traditional organizational boundaries in the academic library. Budgeting, fundraising, marketing and resource sharing competencies were concentrated in the administrative positions, with some slight demand for marketing skills in public services, and for resource sharing in both technical services and "other" positions.

The proportion of all ads mentioning faculty status was 40% (n=68), exceeding the faculty status ratios reported by Starratt, et al of 21.9% in 1972 and 33% in.1984. These higher numbers cannot be dismissed as a factor of the overall high proportion of administrative ads, because in that category faculty status was specified in only 39% of ads, as compared to 55% in Technical Services and 46% in Public Services.

The ratio of ads specifying tenure track was 31.2% overall, quite a jump from the 1.1% reported by Starratt, et al in 1972. The ratio for the tenure-related competency variable of publishing or professional activity was 28.2% (n=48). The correlation between tenure-eligibility and publishing or professional activity was predictably highest in the administrative position category, as shown in Figure 7.

Figure 6

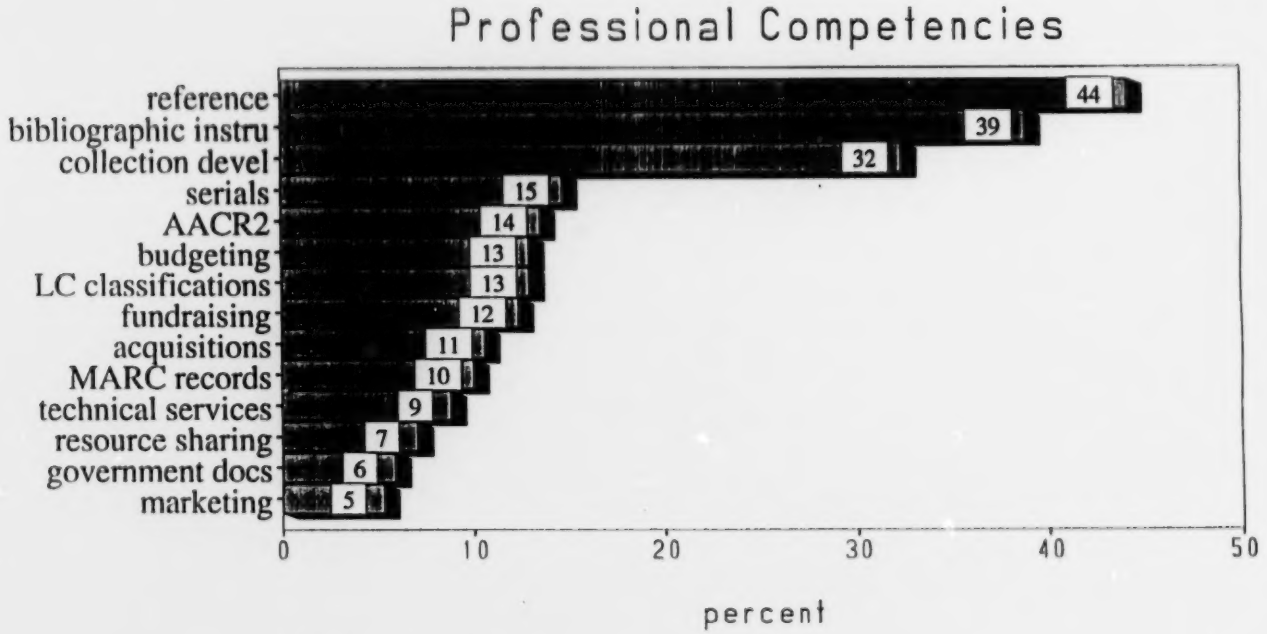

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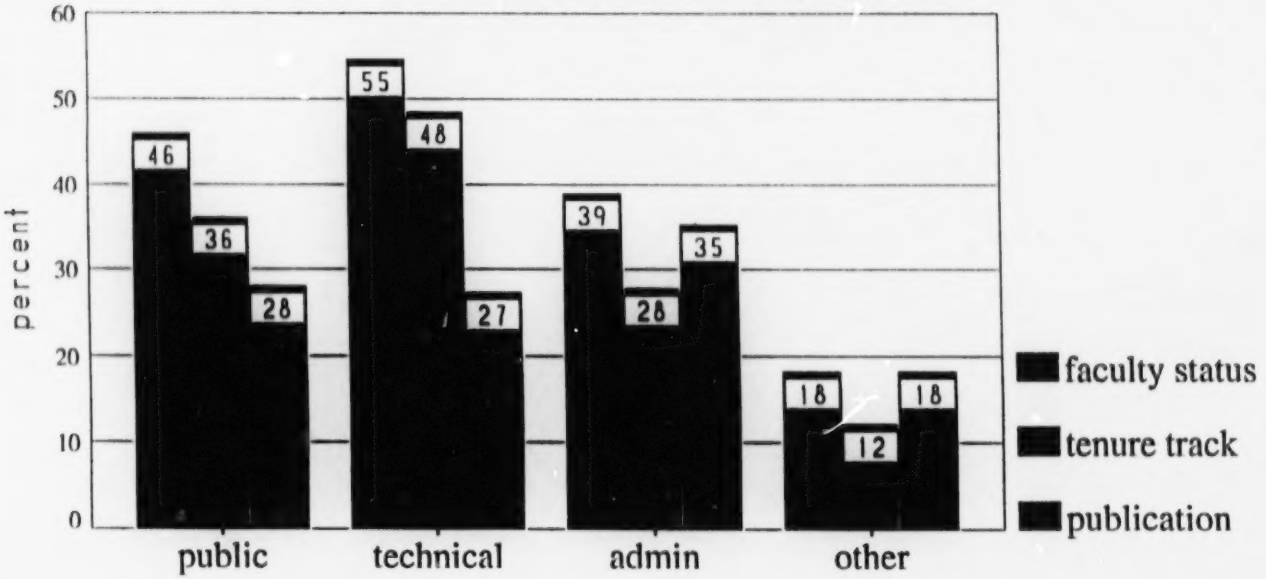
Figure 7

Faculty Status, Tenure Track, and Publication Requirement



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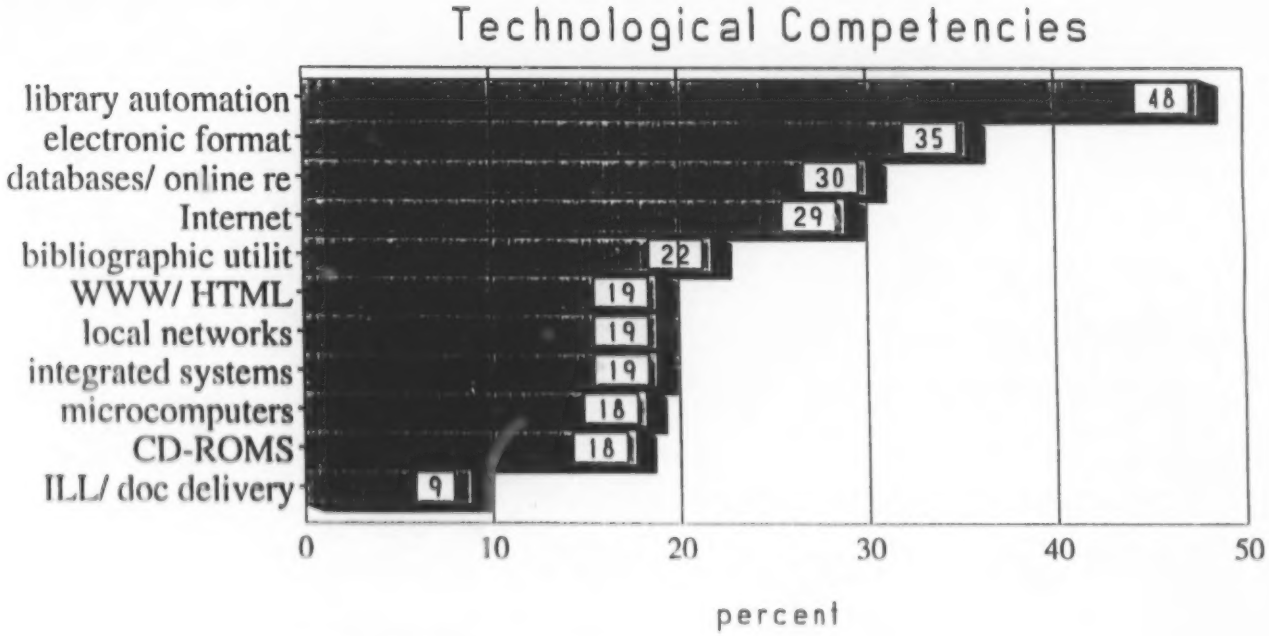
As mentioned previously, this study's composite index for technological competency was 82.4%. Figure 8 illustrates demand ratios for the individual technological competencies. Not surprisingly, the leader of all the individual technological competencies, with a frequency ratio of 48%, was knowledge of library automation. This is an emphatic increase from earlier figures, i.e., a 34% ratio for 1984 (Starrat, et al, 1985) and 32.4% for 1991 (Hill, 1992).

As with professional competencies, technological competency distributions reflected specialization areas, with demand for proficiency in library automation and bibliographic utilities concentrated in technical services. Proficiency in Dewey Decimal Classification was specified in only 2.4% (n=4) of ads, authority control in only 1.8% (n=3). Demand for domain-specific technological competencies was higher in technical services than in public services positions confirming the findings of earlier studies (Reser and Schuneman, 1992; Xu, 1996).

Demand for proficiency in electronic formats, databases and online resources, microcomputers, CD-ROMs, and Internet searching was concentrated in public services positions. Knowledge of resources in electronic formats was required in three-fifths of public services positions. Knowledge of databases and/or online resources and knowledge of the Internet were each specified in 27 of 50 public service ads. Only 16 of the 50 public service ads specified knowledge of CD-ROMs. ILL proficiency was in fairly even demand for all position types.

Knowledge of integrated systems was required in roughly one-fourth of all position categories, except public services, where only 4 of 50 ads made mention of it. Knowledge of the Web and HTML writing was specified in 14 of 19 "other" ads, which included area specialists and technology librarians. Thirteen of the other eighteen ads with this specification were in the public services category. Knowledge of local networks (LANS and WANS) was in greatest demand in the "other" category (12 of 33 ads),

Figure 8



*Decimals were rounded

followed by the administrative category (12 of 53 ads). The 2.4% demand for distance learning (n=4) was split between the administrative and "other" domains.

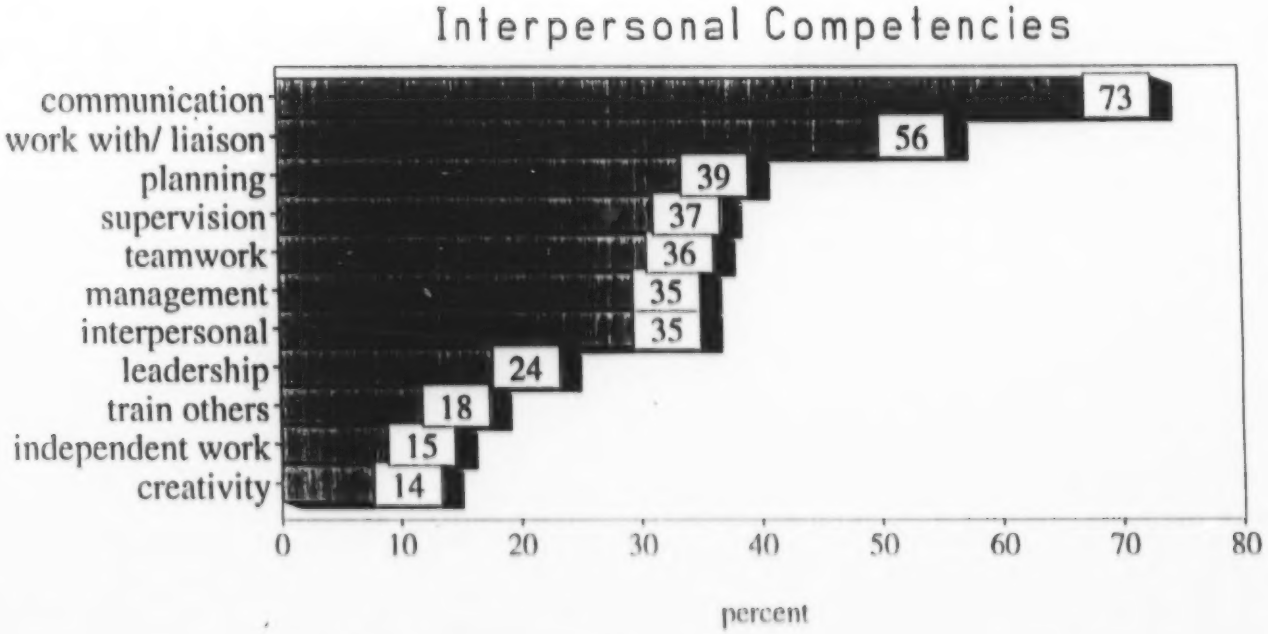
Electronic publishing or digitization was specified in 7.1% of ads (n=12). The leading frequency ratio for software and/or operating systems was, not surprisingly, "Windows", mentioned in 5.9% of ads (n=10). Demand was less than 6% for all other miscellaneous technological competencies.

The leading variables in the interpersonal competency category were communication and "work with" or liaison proficiency. Figure 9 illustrates the overall distributions for individual interpersonal competencies. Communication, including written and oral, was a specified competency in 72.9% (n=124) of the ads. leading all qualifications in all categories, except education, where the nearly universal MLS requirement was noted. This demand for communication proficiency exceeds Hill's percentage of 58% for 1990 *American Libraries* ads. It confirms the steadily increasing demand evidenced by a rise from 6% in 1979 to 43.7% in a 1984 study (Starratt, et. al, 1985). Demand for communication skills was at fairly equal levels for all position types.

As with the technological category, marginally significant competencies were factored into the composite interpersonal competency variable. These included flexibility, specified in only 6.5% (n=11) of ads, and a quality generally expressed in ads as an ability to work with diverse clientele. This competency, defined by the author as "cultural pluralism", had an incipient demand of 5.3% (n=9). This competency was treated as a smaller subset of the "work with" proficiency, which was specified in 55.9% (n=95) of ads, in connection with miscellaneous constituencies. It was interesting to note the ranking of "work with" demand by position, from a high concentration in 21 of 33 "other" positions, to incidence in 33 of 54 administrative positions, 28 of 50 public service positions, and least demand in 13 of 33, in technical service positions.

Another subset of the "work with" proficiency was "working with computer center staff", which was specified in 10% of ads (n=17). The phrase invites speculation on the

Figure 9



*Decimals were rounded

various competencies implied in these circumstances. The general proficiency of "working with others" implies the ability to extend oneself in order to forge a particular working relationship. To work with computer center staff implies integrating knowledge of technology with general "work with" managerial proficiencies. In the author's view, this proficiency exemplifies the *socio-technical* skills Malinconico described as essential to effective librarianship (1989, p. 143). The "work with computer center staff" competency was specified in all position categories except technical services.

Proficiency in planning, with an overall ratio of 39.4% (n=67), was in least demand in public services (18 of 50), in equally significant demand for technical services and "other" positions (11of 33), and in greatest demand in administrative positions (27 of 54). Management was in even less demand in public services (7 of 50), with technical services and "other" again tied at a significant demand level (10 of 33), and administrative positions with, not surprisingly, very high demand (33 of 54).

Supervisory competency was specified in 37.1% (n=63) of ads. Supervisory competency ratios for position types were tied at a high ratio of 48% for technical services and administrative positions, with a 30% demand in public services, and only 18% demand in the "other" category. The contrast between supervisory competency ratios in public and technical services confirms findings from Zhou's study which showed a rise in supervisory demand for catalogers from 8% in 1971 to 37% in 1990 while demand remained below 13 % for non-administrative reference librarians.

Teamwork or collaborative interaction was specified as a qualification or part of the job in 36.5%(n=62) of ads. This proficiency was at fairly equal levels for all position types. Literal specification of interpersonal skills, per se, was included in 35.3% (n=60) of ads. Leadership was a prerequisite for 23.5% (n=40) of all positions, clustered mainly in administrative positions (24 of 54). The 18% frequency ratio for "Training others" was most notable in the "other" category (9 of 33 ads), followed by public services (10 of 50).

Ability to work independently was mentioned in 14.7% (n=25) of the overall sample, with the greatest demand in public services (11 of 50 ads). Creativity was a qualification for 13.5% (n=23) of positions. Distribution for this proficiency by position types was highest in public services (8 of 50), followed by administrative (8 of 54), technical services (5 of 33), and "other" (2 of 33) positions.

Distribution of interpersonal competencies by position categories was one of the most interesting findings of this investigation, as the specific distributions suggest "ideal" composite personality profiles for different types of academic library positions.

Regarding geographic distribution, findings were of limited use as a measurement of regional job opportunities. As mentioned previously, few entry-level positions were advertised, while administrative positions made up a disproportionate number of sample advertisements.

Consistent with Block's study, the South had the highest proportion of advertised positions, as shown in Table 3. This finding contradicts results of placement surveys, which consistently reflect the regional dominance of the North Atlantic and Midwestern regions. This specific finding may be more indicative of regional job marketing strategies than of regional job opportunities. As in Block's 1980 study, the smallest proportion of ads in the present study came from the least prosperous East South Central region. Position types were fairly evenly distributed among regions.

Table 3

Geographic Distributions

NORTHEAST **22.9% (n=39)**	**MIDWEST** **25.9% (n=44)**	**SOUTH** **33.5% (n=57)**	**WEST** **17.6% (n=30)**
Northeast **7.6% (n=13)**	**East North Central** **15.9% (n=27)**	**South Atlantic** **18.8% (n=32)**	**Mountain** **3.5% (n=6)**
ME, NH, VT, MA, RI, CT	OH, IN, IL, MI, WI	DE, MD, DC, VA, WV, NC, SC, GA, FL	MT, ID, WY, CO, NM, AZ, UT, NV
Mid-Atlantic **15.3% (n=26)**	**West North Central** **10% (n=17)**	**East South Central** **2.9% (n=5)**	**Pacific** **14.1% (n=24)**
NY, NJ, PA	MN, IA, MO, ND, SD, NE, KS	KY, TN, AL, MS	WA, OR, CA, AK, HI
		West South Central **11.8% (n=20)**	
		AR, LA, OK, TX	

CONCLUSIONS

This content analysis of academic library position announcements incorporated indicators used in previous studies, with some revisions based on advertising content for the 1996 study year. The correlates selected as relevant to the analysis were occupational competencies, experience requirements, geographic location, faculty/ tenure track status, and publication requirements. Competency classifications were educational, professional, technological, interpersonal, and required experience. Each competency was figured into a composite competency classification for comparison of demand in overall categories. Ads were classified by four position types: public services, technical services, administrative, and a fourth "other" category, which included technology librarians, area specialists, and bibliographers. Administrative positions were over-represented, probably because this position category has the fewest candidates, and therefore benefits from the greater advertising exposure. Definitive conclusions and comparisons with previous studies were constrained by methodological variations and advertising peculiarities. Nevertheless, the author was able to confirm several trends described in previous studies and to identify currently emerging demands for specific competencies.

The current 92.9% demand for an ALA-accredited MLS, showed a decrease from results of 1980 and 1990 job market analyses. This may be due to this study's inclusion of ads for such highly specialized technological positions as Systems Librarians. In any event,

the MLS outweighed all other qualifications for academic library employment. The second most universal employment qualification was communication, both oral and written, specified in 72.9% of ads.

An overall rising demand for technological competencies for all position types was balanced by a sharply decreased demand for proficiency in foreign languages, except in the "other" position category, which included bibliographers.

Professional competencies were specified in 90% of ads, followed by technological competencies in 82.4%, and interpersonal in 79.4% of ads. Distribution of professional and, to some extent, interpersonal competencies was compartmentalized by position type. Technological competencies were the most heterogeneous, showing highest demand in the "other" position category , at 91% , closely followed by public and technical services at 88%. Administrative positions had the lowest demand for technological competency, at 69%. Only 64% of ads specified a requirement of experience, and 50.6% did not specify years of experience. Experience specifications were generally lowest for the "other" position category. Administrative positions, where experience was specified, averaged five years, while technical services had an average requirement of three, and public services of two years

Analysis of distributions by geographic locations found a preponderance (33.5%) of announcements from the South, in particular the South Atlantic region. This finding may indicate greater advertising from this area, particularly at the administrative level, rather than a greater number of area job opportunities. Position types were fairly evenly distributed among regions. Thus, geographic mobility would appear to be an added prerequisite for those seeking academic library employment.

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Appendix A

Data Collection Form

Case no._____ Issue [Year/Month/Page]_____|_____|_____ Fac Stat_____ Ten____
Position Type _____ 1.Pub Serv 2.Technical Serv 3.Admin/ Special 4.Other
Site_____Title _____ State ____. Region ____
1.NE:**[MN, NH, VT, MA, RI, CT]*** NE **[NY, NJ, PA]*** MidAtl
2.MW:[OH, IN, IL, MI, WI]* **E.N.C.** [MN, IA, MO, ND, SD, NE, KS]* **WNC**
3.SO:[DE, MD, DC, VA, WV, NC, SC, GA, FL]***SA**.[KY, TN, AL, MS]***ESC**[AR, LA, OK, TX]***WSC**
4.WT:[MT, ID, WY, CO, NM, AZ, UT, NV]* **MT** [WA, OR, CA, AK, HI]* **PA**

Interpersonal Competencies

CO	CR	IW	IP	MN	NE	LE	PL	TW	WW

CO	Communication Skills	CR	Creativity		
IW	Work independently	IP	Interpersonal skills	MN	Management
NE	Negotiation	LE	Leadership	PL	Planning
TW	Teamwork/collaboration	WW	liasion/ work with exp		

Educational Competencies

AL	CS	FL	SD	SU	IL	IN	IS	IT	LN	WB

AL	ALA MLS AU	CS	Computer science or science degree
FL	Foreign language	SD	Second advanced degree
SU	Subject background		

Experience

EX	CE	YR								

EX	Any experience	CES	Cataloging experience
YR	Years of experience		

Professional Competencies

AA	AQ	BI	BT	CL	FR	GV	LC	MA	MT	RE	RS
SE	TE	PU									

AA	AACR2	AQ	Acquisitions exp	BI	Bibliographic instruction
BT	Budgeting	CL	Collection devel exp	FR	Fundraising/devel
GV	Government docs exp	LC	LC Classifications	MA	MARC Records
MT	Marketing	RE	Reference work	RS	Resource Sharing
SE	Serials work	TE	Technical Services work		
PU	Prof achieve/ published				

Technical Competencies

AU	BU	CD	DB	EF	IL	IN	IS	IT	LN	WB

AU	Automation	BU	Bibliographic utilities	CD	CD-ROMs
DB	DBs/ online resources	EF	Resources in Electr format		
IL	Interlibrary loan	IN	Internet	IS	Integrated systems
IT	Info Technology	LN	Local networks	WB	WWW/ HTML

Appendix B - Experience and Position Type

Crosstabs

any exp * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
any exp	0	24	13	12	13	62
	1	26	20	42	20	108
Total		50	33	54	33	170

years experience * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
years experience	0	33	13	21	19	86
	1	1	1	2	1	5
	2	11	6	3	7	27
	3	5	9	8	5	27
	4		1	2		3
	5		3	13	1	17
	6			3		3
	7			1		1
	8			1		1
Total		50	33	54	33	170

cataloging exp * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
cataloging exp	0	48	19	46	28	141
	1	2	14	8	5	29
Total		50	33	54	33	170

Appendix C - Educational Competencies and Position Type

Crosstabs

ALA MLS * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
ALA MLS	0	4	2	1	5	12
	1	46	31	53	28	158
Total		50	33	54	33	170

second advanced deg * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
second advanced deg	0	39	28	35	26	128
	1	11	5	19	7	42
Total		50	33	54	33	170

subject background * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
subject background	0	42	28	47	25	142
	1	8	5	7	8	28
Total		50	33	54	33	170

computer science deg * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
computer science deg	0	49	33	54	28	164
	1	1			5	6
Total		50	33	54	33	170

foreign language * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
foreign language	0	49	28	53	27	157
	1	1	5	1	6	13
Total		50	33	54	33	170

Appendix D - Professional Competencies and Position Type

Crosstabs

reference * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
reference	0	8	30	40	17	95
	1	42	3	14	16	75
Total		50	33	54	33	170

bibliographic instruction * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
bibliographic instruction	0	5	29	46	24	104
	1	45	4	8	9	66
Total		50	33	54	33	170

collection devel * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
collection devel	0	25	25	42	23	115
	1	25	8	12	10	55
Total		50	33	54	33	170

serials * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
serials	0	50	20	45	30	145
	1		13	9	3	25
Total		50	33	54	33	170

AACR2 * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
AACR2	0	49	21	48	29	147
	1	1	12	6	4	23
Total		50	33	54	33	170

budgeting * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
budgeting	0	48	30	39	31	148
	1	2	3	15	2	22
Total		50	33	54	33	170

LC classifications * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
LC classifications	0	50	20	49	29	148
	1		13	5	4	22
Total		50	33	54	33	170

fundraising * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
fundraising	0	47	32	40	30	149
	1	3	1	14	3	21
Total		50	33	54	33	170

acquisitions * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
acquisitions	0	48	22	51	31	152
	1	2	11	3	2	18
Total		50	33	54	33	170

MARC records * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
MARC records	0	50	25	49	29	153
	1		8	5	4	17
Total		50	33	54	33	170

technical services * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
technical services	0	50	26	49	30	155
	1		7	5	3	15
Total		50	33	54	33	170

resource sharing * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
resource sharing	0	50	30	48	30	158
	1		3	6	3	12
Total		50	33	54	33	170

government docs * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
government docs	0	48	28	51	33	160
	1	2	5	3		10
Total		50	33	54	33	170

marketing * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
marketing	0	47	33	49	32	161
	1	3		5	1	9
Total		50	33	54	33	170

Appendix E - Technical Competencies and Position Type

Crosstabs

library automation * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
library automation	0	33	11	25	20	89
	1	17	22	29	13	81
Total		50	33	54	33	170

electronic format * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
electronic format	0	20	25	45	20	110
	1	30	8	9	13	60
Total		50	33	54	33	170

databases/ online resources * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
databases/ online resources	0	23	24	47	25	119
	1	27	9	7	8	51
Total		50	33	54	33	170

info technology * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
info technology	0	9	7	9	7	32
	1	41	26	45	26	138
Total		50	33	54	33	170

bibliographic utilities * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
bibliographic utilities	0	49	16	43	25	133
	1	1	17	11	8	37
Total		50	33	54	33	170

WWW/ HTML * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
WWW/ HTML	0	37	30	52	19	138
	1	13	3	2	14	32
Total		50	33	54	33	170

local networks * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
local networks	0	44	28	45	21	138
	1	6	5	9	12	32
Total		50	33	54	33	170

integrated systems * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
integrated systems	0	46	24	43	25	138
	1	4	9	11	8	32
Total		50	33	54	33	170

CD-ROMS * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
CD-ROMS	0	34	26	51	29	140
	1	16	7	3	4	30
Total		50	33	54	33	170

ILL/ doc delivery * POS Crosstabulation

Count

		POS				Total
		public	technical	admin	hybrid	
ILL/ doc delivery	0	45	31	50	29	155
	1	5	2	4	4	15
Total		50	33	54	33	170

Appendix F - Interpersonal Competencies and Position Type

Crosstabs

communication * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
communication	0	11	11	13	11	46
	1	39	22	41	22	124
Total		50	33	54	33	170

work with/ liaison * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
work with/	0	22	20	21	12	75
	1	28	13	33	21	95
Total		50	33	54	33	170

planning * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
planning	0	32	22	27	22	103
	1	18	11	27	11	67
Total		50	33	54	33	170

supervision * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
supervision	0	35	17	28	27	107
	1	15	16	26	6	63
Total		50	33	54	33	170

teamwork * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
teamwork	0	31	20	39	18	108
	1	19	13	15	15	62
Total		50	33	54	33	170

management * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
management	0	43	23	21	23	110
	1	7	10	33	10	60
Total		50	33	54	33	170

interpersonal * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
interpersonal	0	32	20	33	25	110
	1	18	13	21	8	60
Total		50	33	54	33	170

train others * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
train others	0	40	27	49	24	140
	1	10	6	5	9	30
Total		50	33	54	33	170

independent work * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
independent work	0	39	28	48	30	145
	1	11	5	6	3	25
Total		50	33	54	33	170

creativity * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
creativity	0	42	28	46	31	147
	1	8	5	8	2	23
Total		50	33	54	33	170

flexibility * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
flexibility	0	49	27	52	31	159
	1	1	6	2	2	11
Total		50	33	54	33	170

cultural pluralism * POS Crosstabulation

Count

		POS				
		public	technical	admin	hybrid	Total
cultural pluralism	0	48	31	49	33	161
	1	2	2	5		9
Total		50	33	54	33	170